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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/877,576	06/08/2001	Michael A. O'Connor	5181-72700	4215

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EXAMINER

EDELMAN, BRADLEY E

ART UNIT	PAPER NUMBER
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2153

DATE MAILED: 12/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/877,576

Applicant(s)

O'CONNOR, MICHAEL A.

Examiner

Bradley Edelman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/11/02</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is a first Office action on the merits of this application. Claims 1-27 are presented for examination.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1. Claims 17-23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. These claims are directed to a "carrier medium," which according to the specification, may consist of an electrical, electromagnetic, or other signal (see p. 17, line 25 – p. 18, line 3). A "signal" does not fall within the allowed statutory categories of a process, machine, manufacture, or composition of matter.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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2. Claims 3, 4, 7, 8, 9, 12, 13, 16, 19, 20, 23, and 26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding these claims, they all contain the terms "unmounting" and "mounting." These terms are used in the specification, but are not defined in any definite way as to convey to one of ordinary skill in the art exactly what is done when the host is "mounted" and "unmounted." For instance, "mounting" could mean any of "setting" or "installing" or physically moving a disk, or "providing access" within the context of the claims and the specification. Thus, the steps of mounting and unmounting are not enabled by the specification.

3. Claims 3, 4, 7, 8, 9, 12, 13, 16, 19, 20, 23, and 26 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are unclear for the reasons given above regarding the words "mounting" and "unmounting."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 6, 10, 15, 17, 22, 24, and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Araki et al. (U.S. Patent No. 6,567,865, hereinafter "Araki").

In considering claim 1, Araki discloses a method of allocating storage in a computer network (Fig. 1), said method comprising:

Initiating a storage re-allocation procedure in said computer network, wherein the re-allocation procedure is configured to re-allocate a first storage from a first host in said computer network to a second host in said computer network; determining whether I/O corresponding to said first storage is in progress; and halting said re-allocation procedure in response to detecting I/O corresponding to said first storage is in progress (col. 4, lines 23-27, 33-35; col. 5, lines 55-65, wherein the second host makes an I/O request to the storage, but is "forced to wait" if access if the first host is "currently executing" its own I/O access of the storage).

In considering claim 6, Araki further discloses that determining whether I/O corresponding the first storage is in progress comprises utilizing system commands to determine whether any processes have reads or writes in progress to said first storage (col. 4, lines 4-8, "read/write data operation").

Claims 10, 17, and 24 present a computer network, carrier medium, and computing node for carrying out the same steps described in the method of claim 1, and are thus rejected for the same reasons.

Claims 15 and 22 present a computer network and carrier medium for performing the same steps described in the method of claim 6, and are thus rejected for the same reasons.

In considering claim 27, Araki further discloses that the re-allocation mechanism comprises a processor executing operating system software, and wherein said re-allocation procedure comprises a native function of said operating system (inclusion of an operating system software running native functions are both inherently necessary in the Araki system).

5. Claims 1, 5, 6, 10, 14, 15, 17, 21, 22, 24, and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Wolff (U.S. Patent No. 6,044,367).

In considering claim 1, Wolff discloses as prior art a method of allocating storage in a computer network ("network"), said method comprising:

Initiating a storage re-allocation procedure in said computer network, wherein the re-allocation procedure is configured to re-allocate a first storage from a first host in said computer network to a second host in said computer network; determining whether I/O corresponding to said first storage is in progress; and halting said re-allocation

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procedure in response to detecting I/O corresponding to said first storage is in progress (col. 1, lines 56-65, wherein clients make I/O requests for storage at a server, but are forced to wait in a queue if a current I/O request is accessing the storage).

In considering claim 5, Wolff further discloses that the first host and the second host utilize incompatible file systems (col. 1, lines 47-50, "heterogeneous computing environments"), and wherein the computer network is a storage area network (the server stores files).

In considering claim 6, Wolff further discloses that determining whether I/O corresponding the first storage is in progress comprises utilizing system commands to determine whether any processes have reads or writes in progress to said first storage (I/O requests for files are necessarily read or write requests).

Claims 10, 17, and 24 present a computer network, carrier medium, and computing node for carrying out the same steps described in the method of claim 1, and are thus rejected for the same reasons.

In considering claim 14, Wolff further discloses that the first host and the second host utilize incompatible file systems (col. 1, lines 47-50), and wherein said first storage is re-allocated from said first host to said second host (i.e. when the second client's request reaches the front of the queue).

Claims 15 and 22 present a computer network and carrier medium for performing the same steps described in the method of claim 6, and are thus rejected for the same reasons.

Claim 21 presents a carrier medium, performing the same steps described in the method of claim 5, and is thus rejected for the same reason.

In considering claim 27, Wolff further discloses that the re-allocation mechanism comprises a processor executing operating system software, and wherein said re-allocation procedure comprises a native function of said operating system (i.e. it works for heterogeneous computing environments).

6. Claims 1, 2, 6, 10, 11, 15, 17, 18, 22, 24, 25, and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by DeKoning et al. (U.S. Patent No. 6,657,268, hereinafter "DeKoning").

In considering claim 1, DeKoning discloses a method of allocating storage in a computer network, said method comprising:

Initiating a storage re-allocation procedure in said computer network, wherein the re-allocation procedure is configured to re-allocate a first storage from a first host in said computer network to a second host in said computer network (col. 7, lines 1-10, wherein the host device 104 makes a data access request);

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Determining whether I/O corresponding to said first storage is in progress; and halting said re-allocation procedure in response to detecting I/O corresponding to said first storage is in progress (col. 7, lines 28-31, 39-43, wherein the access request is denied if the other host is accessing the storage).

In considering claim 2, DeKoning further discloses:

providing an indication to a user said reallocation procedure is halted in response to said halting (col. 7, lines 32-34, "error message" is sent to the requesting host);

detecting said I/O is complete and no further I/O corresponding to said first storage is in progress (col. 7, lines 55-58; col. 11, lines 18-22, wherein if the first host is no longer accessing the storage and the "sticky" period is expired, the second storage may access the storage); and

providing an indication to a user that no I/O corresponding to said first storage is in progress, in response to said detecting (col. 11, lines 31-35, "the other host devices are informed... upon ownership transfer").

In considering claim 6, DeKoning further discloses that determining whether I/O corresponding the first storage is in progress comprises utilizing system commands to determine whether any processes have reads or writes in progress to said first storage (I/O accesses to the storage will necessarily read or write to the storage).

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Claims 10, 17, and 24 present a computer network, carrier medium, and computing node for carrying out the same steps described in the method of claim 1, and are thus rejected for the same reasons.

Claims 11, 18, and 25 present a computer network, carrier medium, and computing node for carrying out the same steps described in the method of claim 2, and are thus rejected for the same reasons.

Claims 15 and 22 present a computer network and carrier medium for performing the same steps described in the method of claim 6, and are thus rejected for the same reasons.

In considering claim 27, DeKoning further discloses that the re-allocation mechanism comprises a processor executing operating system software, and wherein said re-allocation procedure comprises a native function of said operating system (it must necessarily be a native function of the operating system in order to work).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley Edelman whose telephone number is 571-272-3953. The examiner can normally be reached from 9 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached at 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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December 3, 2004